It is respectfully submitted that independent claim 4 has the following limitations:

selecting M reference frames for a given original video frame from a video sequence having a plurality of video frames, each frame containing a plurality of coefficients, wherein M is a positive integer greater than 1;

partitioning said original video frame into rectangular blocks of coefficients; and from each of the M reference frames:

forming at least one reference block of coefficients from an offset of the rectangular blocks;

computing the differences between said at least one reference block and the rectangular blocks;

obtaining the **difference** between said rectangular block and each said reference block of coefficients for providing a block **difference** at least partially involving summation of absolute values of the **differences** between corresponding individual coefficients in each block; and

optimizing the offset.

The claimed invention is different from the cited *Koto* and *Kato* references in at least two aspects:

1) According to *Koto*, the predictive reference block is generated by computing a linear sum of the reference blocks using weighting factors (paragraph [0012]). As shown in Figure 1, the reference blocks are summed by a predictive macroblock generator 119 by an adder to form a predictive macroblock (132, for example) before the predictive macroblock is subtracted from the input video signal 100 by the subtractor 110 in order to obtain the prediction error signal 101. Thus, according to *Koto*, the reference blocks are linearly combined to form a weighted predictive block. The weighted predictive block is then used to compare with the current block for obtaining a block difference.

In the claimed invention, the block difference is obtaining differently. It is obtained partially from a summation of the absolute values of the **differences** between corresponding individual coefficients in each of the rectangular blocks of coefficients and at least one reference block of coefficients.

Koto does not disclose or even suggest obtaining the block **difference** using the claimed method. The encoder as disclosed in Figures 1, 2, 3, 8 and 9 **cannot** be used to obtain the block difference as claimed.

2) The Examiner points to Figure 33 to show that *Koto* discloses obtaining a block difference at least partially based on a summation of differences between corresponding individual coefficients in each of said rectangular blocks of coefficients and said at least one reference block of coefficients.

Figure 33 and the description thereof (paragraphs [0189]-[0198]) are only concerned with calculating the weight factors. These weight factors are used to compute a linear sum of the reference blocks in order to generate the predictive reference block (paragraph [0012]). Figure 33 does not show a procedure wherein a block **difference** is obtained at least partially based on a summation of differences between corresponding individual coefficients in each of said rectangular blocks of coefficients and said at least one reference block of coefficients. Kato does not disclose the feature that a block **difference** is obtained at least partially based on a summation of differences between corresponding individual coefficients in each of said rectangular blocks of coefficients and said at least one reference block of coefficients

For the above reasons, *Koto*, in view of *Kato*, fails to render claim 4 obvious.

Independent claim 21 also has the limitation of obtaining the difference between said rectangular block and each said reference block of coefficients for providing a block difference at least partially involving summation of absolute values of the differences between corresponding individual coefficients in each block.

As with the reasons regarding claim 4 above, *Koto*, in view of *Kato*, fails to render claim 21 obvious.

As for claims 3, 5-7, 9-17, 20, 22, 23, 25 and 27-30, they are dependent from claims 4 and 21 and recite features not recited in claims 4 and 21. For reasons regarding claims 4 and 21 above, claims 3, 5-7, 9-17, 20, 22, 23, 25 and 27-30 are also distinguishable over the cited *Koto* and *Kato* references.

At section 6, claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Koto*, in view of *Kato*, and further in view of *Wu et al.* (U.S. Patent No. 6,700,933, hereafter referred to as *Wu*). The Examiner cites *Wu* for disclosing that each of the M

video frames selected as the M reference frames is computed by decoding the same frame of original video at a variety of quality settings.

Claim 8 is dependent from claim 4. Thus, claim 8 is also distinguishable over the cited *Koto*, *Kato* and *Wu* references.

CONCLUSION

Claims 3-7, 9-17, 20-23, 25 and 27-30 are allowable. Early allowance of all pending claims is earnestly solicited.

Respectfully submitted,

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Date: March 11, 2008

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